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Request for Review
FCC, Office of the Secretary
445 12th Street SW
Washington, DC 20554

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FCC - MAILROOM

David J. Boyer
Director of Business Services

Re: Docket No. 02-6

Dear FCC,

1. Introduction

Cleveland Heights School District appeals the February 23, 2004 decision by the Schools and Libraries Division ("SLD") of the Universal Service Administrative Company that the services associated with the following Year 2003 Funding Request Numbers constitute Internal Connections rather than Telecommunications Services:

1003983 (Canterbury Elementary School)
1003202 (Cleveland Heights High School)
1003788 (Fairfax Elementary School)
1003635 (Gearity Elementary School)
1004189 (Monticello Middle School)
1004404 (Oxford Elementary School)
1002360 (Roxboro Elementary School)
1002477 (Roxboro Middle School)

Each school's Billed Entity Name, Billed Entity Number, and the numbers of the FCC Form 470 and FCC Form 471 associated with each FRN are noted in the BEN summary page included as an attachment.

2. Details of Cleveland Heights' Funding Request

A. Summary of the District's Funding Request

The District is seeking universal service funds to subsidize the cost of telecommunications services provided by SBC Ohio (SPIN 143001688). Specifically, the District is seeking funds to subsidize the cost of leased fractional T-1, ISDN BRI, ISDN PRI and Centrex lines, leased equipment used to deliver the ISDN PRI and Centrex services, and installation and maintenance of that equipment.

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B. Components of the District's Funding Request

1. Digital Transmission Services

a. Fractional T-1

Each school leases one fractional T-1 line that it uses to connect to databases at the Cleveland Public Library.¹

b. ISDN BRI

Each school leases one ISDN BRI line that provides it with data connectivity in the event there is failures in the District's WAN.

c. ISDN PRI

The high school leases one ISDI PRI, while the elementary and middle schools, and Taylor Academy – a multipurpose building where some 9th and 10th grade students attend classes - share three leased ISDN PRIs.² The ISDN PRIs are the schools' primary source of voice connectivity via the Public Switched Telephone Network ("PSTN"). Each of these lines has 23 channels and carries both inbound and outbound voice traffic.³

d. Centrex

The high school leases 13 Centrex lines, while the elementary and middle schools each lease 7 Centrex lines. These lines have been retained in order to ensure that, in the event any of the ISDN PRI lines fail, each school has an alternate way of obtaining voice connectivity via the PSTN.⁴

2. On Premise Priority 1 Equipment

a. Cisco 3725 Router

Each school has a Cisco 3725 Router, which supports both inbound and outbound voice traffic on both the ISDN PRI and Centrex lines.

¹ In the District's FCC Form 471, these fractional T-1 lines are referred to as 56K or 64K lines.

² The 9th and 10th grade students who attend classes at Taylor Academy are included in the student population at Cleveland Heights High School when calculating the high school's National School Lunch Program data.

³ In the District's FCC Form 471, it mistakenly indicated that all four ISDN PRI lines were used exclusively by the high school. As noted above, the high school has one ISDN PRI. The other three ISDN PRIs are shared by the elementary and middle schools and Taylor Academy. The District corrected this error in the attachments to its appeal to the SLD, and in the attachments to this appeal.

⁴ In the District's FCC Form 471, these lines are referred to as POTS lines. On the Form 471, the District mistakenly indicated that the high school had 40 lines and that the elementary and middle schools had 12 lines. The District corrected this error in the attachments to its appeal to the SLD, and in the attachments to this appeal.

b. Cisco 3524 Power Switch

Each school has between one and sixteen Cisco 3524 Power switches - the number of switches at each school is dictated by the number of network closets at the school, which in turn is dictated by the number of phones at the school. The 3524s provide the same functionality as a Private Branch Exchange switching system ("PBX"), and are used exclusively to manage voice traffic moving to and from each school and the PSTN, as well as within each school.⁵ The 3524s are not used to manage data traffic.⁶

c. Cisco MCS 7835-1266 Server w/ Tape Drive

The high school also has a Cisco 7835-1266 server, which hosts the operational software - Cisco Call Manager - that coordinates the high school's voice traffic.⁷

d. Ancillary Equipment

Each school also has equipment such as interface cards, operational software and uninterruptible power supply necessary to operate the routers, power switches, and server.

3. Professional Services

The equipment used to deliver the ISDN PRI and Centrex services was installed, and is maintained by the District's service provider.

3. The SLD's Decision regarding the District's Funding Request

In Funding Commitment Decision Letters ("FCDLs") dated June 23, 2003, the SLD notified the District that "Category of service was changed from Telecommunications to Internal Connections. Given demand, the funding cap will not provide for Internal Connections at your approved discount level to be funded."

The District appealed the SLD's finding to the SLD on August 21, 2003.

In Administrator's Decision on Appeal Letters dated February 23, 2004, the SLD notified the District that its appeal had been "denied in full."

4. The SLD's Decision on Appeal regarding the District's Funding Request

A. The "Single Demarcation" Requirement

⁵ Calls within each school can be completed via four-digit dialing that is equivalent in functionality to that provided by a PBX system or a Central Office-based system such as Centrex.

⁶ See the discussion of Virtual LAN ("VLAN") software at page 12.

⁷ Among other things, the Call Manager software performs the bridging for conference calls and provides functionality such as Park, On Hold, Transfer and Forward.

The SLD found that the District was in violation of the “Single Demarcation” requirement. The SLD noted that the Single Demarcation requirement states that there must be a “specific demarcation (a single dividing line) between the LAN and the WAN.”⁸

The SLD found “three demarcations between the requested equipment and the WAN: the District’s Network Operations Center at Taylor Academy (“Taylor”); the ISDN Public Switched Telephone Network (PSTN); and the PSTN.”⁹

B. The “Continuous” Requirement

The SLD found that the District was in violation of the “Continuous” requirement. The SLD noted that the Continuous requirement states that the “the components making up a service provider’s end-to-end service must be architecturally directly connected, and cannot have cabling, network hubs, or other components within this directly-connected architecture.” The SLD found that given the District’s construction and operation of a WAN with District funds, the “Continuous requirement was clearly in violation, and therefore provided confirmation that the requested equipment be defined as Internal Connections.”¹⁰

5. Discussion of the Decision on Appeal

A. The Single Demarcation Requirement

1. Cleveland Heights High School Does Not Share its ISDN PRI with Taylor Academy

As detailed in Section 2 above, Cleveland Heights High School relies on its own dedicated ISDN PRI line for voice service. Thus, even if Taylor Academy could be said to constitute the “demarcation point” for the three ISDN PRI lines that Taylor shares with both the elementary and middle schools, Taylor cannot be said to play that role for the ISDN PRI line used by the high school.

2. None of the Other Schools’ “Requested Equipment” is Located at Taylor Academy

None of the requested equipment used to provide the elementary and middle schools with voice connectivity is located at Taylor Academy.

Even if requested equipment was located at Taylor, it does not appear that such a network configuration would violate the single demarcation requirement.

⁸ February 23, 2004 Administrator’s Decision Letter at page 2.

⁹ February 23, 2004 Administrator’s Decision Letter at page 2.

¹⁰ February 23, 2004 Administrator’s Decision Letter at page 2.

A diagram posted on the SLD web site illustrates a “wide area network configuration that might be able to meet the on-premise priority 1 conditions”.¹¹ The diagram shows a “School District Facility” building and four schools connected by a “WAN Cloud”. The school district facility and the four schools each contain a router and the school district building is connected to an “Internet Service Provider or Other Priority 1 Service.” The diagram states, “[t]he routers can meet FCC conditions only if the information transmitted over this equipment is limited to that associated with the end to end Priority 1 service. For example, if the Priority 1 service is Internet access, then data could not be exchanged directly among the sites across the WAN links.”¹²

Taylor’s relationship to the elementary and middle schools mirrors the relationship between the “School District Facility” and the four schools detailed in the diagram. That is, Taylor and the schools are connected by a WAN, and share a service, in this case ISDN PRI, that has its head end at Taylor. Thus, even if any of requested equipment detailed in the District’s funding request was located at Taylor, it does not appear that this would violate the Single Demarcation requirement.

3. ISDN PRI Service and Centrex Service

The SLD found that because each school relies on both the “ISDN Public Switched Telephone Network (PSTN)” and the “PSTN”, each school has more than one demarcation.

The SLD appears to be taking issue with the fact that the requested equipment provides each school with voice connectivity via both ISDN PRI and Centrex services.

As detailed above, each school’s primary source of voice service is leased ISDN PRI lines. However Cleveland Heights High School also leases 13 Centrex lines, while the elementary and middle schools each lease 7 Centrex lines. This Centrex service ensures that each school will continue to have voice service in the event that their primary voice service - provided by their ISDN PRI lines - fails. The same service provider provides both the ISDN PRI and the Centrex services and both services are delivered via the same requested equipment at each school.

Using the same equipment to support two types of voice service from the same service provider - one of which is nominal in scope, and designed to be used in the event that there is a problem with the other - does not appear to be inconsistent with the requirement that there be a “single dividing line between the local area network and [the] wide area network.”¹³

¹¹ See www.sl.universalservice.org/images/diagrams/WAN.gif

¹² The diagram does not indicate whether the “School District Facility” is an instructional or non-instructional site. Taylor is used for both instructional and non-instructional purposes. As noted in footnote 2 above, Taylor is used to provide classes to 9th and 10th graders. These students are included in the population at Cleveland Heights High School for purposes of calculating National School Lunch Program data, but they attend classes at Taylor.

¹³ See “Must have a specific demarcation” at www.sl.universalservice.org/reference/onpremp1.asp.

Conversely, requiring complementary services such as these to be separately engineered when - as is the case here - those services can rely on the same network infrastructure at no additional cost or loss in functionality would appear to be inconsistent with at least the spirit of the "Economically Justifiable" rule. That rule states "[c] onfigurations that attempt to meet the conditions by including redundant components...are contrary to program requirements to choose the most cost-effective service."¹⁴

Thus, the District believes that using the equipment to provide each school with voice connectivity via both ISDN PRI service and nominal Centrex service does not constitute a violation of the "Single Demarcation" rule.

To the extent the FCC believes that sharing equipment in this manner does violate the "Single Demarcation" rule, the shared use has not resulted in any increased costs to the District or to the universal service fund and is consistent with the "Economically Justifiable" rule. Consequently, the District asks that the shared use be allowed.

B. The Continuous Requirement

1. The SLD's Ruling is Inconsistent with the FCC's Tennessee Decision

The SLD ruled that the District's decision to construct a WAN between its schools and operate that WAN with District operating funds violated the requirement that "the components making up a service provider's end-to-end service must be architecturally directly connected, and cannot have cabling, network hubs, or other components within this directly-connected architecture (the 'Continuous' requirement)."¹⁵

The SLD's ruling cannot be reconciled with the FCC's analysis of the funding request filed by the state of Tennessee in In the Matter of Request for Review by the Department of Education of the State of Tennessee of the Decision of the Universal Service Administrator, Application 18132, FCC 99-216, CC Docket 96-45, CC Docket 77-21, released and adopted August 11, 1999) ("the Tennessee decision").

The funding requests filed by Tennessee and the District both feature services supported by equipment located at individual schools, transported to those schools over a WAN constructed by the applicant.

There are two differences between the District's funding request and Tennessee's request. Unlike Tennessee, the District is not seeking universal service funds to underwrite the construction or operation of its WAN. In addition, the eligible service at issue in Tennessee's funding request was access to the Internet; in the District's request, the eligible service is voice connectivity via leased ISDN PRI and Centrex lines.

¹⁴ See "Must be economically justifiable" at www.sl.universalservice.org/reference/onpremp1.asp.

¹⁵ February 23, 2004 Administrator's Decision Letter at page 2.

In the Tennessee decision, the FCC found that because the WAN connecting schools across the state had been constructed by the state of Tennessee rather than by the service provider, the WAN was not eligible for universal service support.¹⁶

The ineligibility of the WAN was not overcome by the fact that the state had granted its service provider "the right to use certain components of the...wide area network."¹⁷ As the FCC noted in denying Tennessee's request that the fund underwrite the costs associated with use of the WAN:

The fact that these components would not be eligible for discounts if the state continued to own them is determinative of how they should be treated[.] [I]f we were to allow schools to transfer their state-built wide area networks to private parties, who then used that network to provide service and included in the charges to the school some portion of the cost of that network, our rule prohibiting the funding of wide area networks built or purchased by schools would very likely be vitiated.¹⁸

However, the fact that the costs associated with the use of the applicant-constructed WAN were not eligible for universal service support did not prevent the FCC from then analyzing the equipment installed by the service provider at each of the schools in order to determine whether the equipment was: (a) part of the ineligible WAN, (b) eligible Internal Connections, or (c) eligible Internet Access.

As the FCC noted:

The Administrator denied Tennessee's request for discounts on the charges [the service provider] will assess Tennessee for the construction of "Education Hub sites" and [the] purchase of caching servers to be used in [the] provision of Internet access service. In addition, this decision is applicable to new router facilities to be purchased by [the service provider] and located at individual schools.¹⁹

The issue before us devolves to whether Tennessee essentially requested discounts for the purchase of ineligible facilities or eligible services. Based on the specific facts in the record before us, we conclude that the service offered by [the service provider] is Internet access service that is fully supportable, with the exception of charges related to the purchase of existing ConnectTEN components. Therefore, we find that costs related to [the service provider's] purchase of hub sites and caching servers made to provide Internet access service to Tennessee may be properly characterized as part of its Internet access service and instruct the Administrator to work with the Bureau and Tennessee to determine the exact

¹⁶ See section B of the decision, "Eligibility for Discounts on Services Related to Existing ConnectTEN Components", Tennessee decision at pages 8-13.

¹⁷ Tennessee decision at page 9.

¹⁸ Tennessee decision at page 11.

¹⁹ Tennessee decision at page 13.

amount of funds necessary to cover the discounts for Tennessee's Internet access service [.]²⁰

Thus, the District believes that the SLD's finding that the delivery of services over a WAN constructed and operated by the District is, by itself, sufficient to "provide confirmation that the requested equipment be defined as Internal Connections" cannot be reconciled with the detailed review of the relationship between the WAN, the service, and the equipment used to deliver that service which the FCC conducted in the Tennessee decision.

2. The SLD Misapplied the Continuous Requirement to a WAN

The SLD's application of the "Continuous" requirement to the District's WAN is inconsistent with the discussion of the requirement on its web site.

The SLD web site notes, "Internal Connections do not include connections extending beyond a school campus or library branch. This is explained in Section 54.506 of the FCC rules, which indicates that '[t] here is a rebuttable presumption that a connection does not constitute an internal connection if it crosses a public right of way.'"²¹

The web site also notes that the "Continuous" requirement states that "components making up a service provider's end-to-end service must be architecturally directly connected, and cannot have cabling, network hubs, or other components within this directly-connected architecture."²²

The term "cabling" is defined in the Internal Connections section of the FCC's eligible services list as "internal wiring and related components that are eligible for discount includ[ing]...copper, fiber, coax [and] twisted pair [cable], bays, jacks, blocks, panels and terminals."²³

A "hub" is defined in the Internal Connections section of the eligible services list as a "control point for system activity management and growth. A central connection point, hubs are standard terminology for a device with multiple ports that connect multiple computers in a network, and are eligible for discount."²⁴

The term "architecturally directly connected" is not defined in the eligible services list. The FCC's discussion of the equipment at issue in the Tennessee decision makes several references to the equipment but does not specify how all of it was connected. The decision states that five schools contain a router, as well as two "large routers, one facing the Internet and the other facing the [service provider]/BellSouth Connectionless Data

²⁰ Tennessee decision at pages 14-15.

²¹ See www.sl.universalservice.org/reference/onpremp1.asp.

²² See www.sl.universalservice.org/reference/onpremp1.asp.

²³ Eligible Services List published October 18, 2002 at page 32.

²⁴ Eligible Services List published October 18, 2002 at page 20.

Service cloud, [with a]...firewall, caching server, mail server and...domain name service server [between the large routers].”²⁵

The District’s WAN crosses public rights of way in order to connect schools located around the district. Consequently, while per section 54.518 of the FCC’s rules, the District does not believe the costs associated with operating the WAN are eligible to be subsidized by the federal universal service fund, per section 54.506 of the rules, the District does not believe the WAN can be characterized as an Internal Connection.²⁶

As detailed above, the discussion of the Continuous requirement on the SLD web site refers to Internal Connections. Because the WAN does not constitute an Internal Connection, applying the Continuous requirement to the WAN, as the SLD did, is inconsistent with both the logic and analysis of the Tennessee decision, as well as the discussion of the requirement on the SLD web site.

To the extent the Continuous requirement is intended to alter or modify section 54.506 of the FCC’s rules, or the FCC’s Tennessee decision, the SLD’s web site gives no notice of that fact. The web site states that the “the conditions set forth below for eligibility of on-premise Priority 1 equipment are based on an order released by the FCC involving a challenge by the state of Tennessee”.²⁷ Further, the same page on the web site contains an extensive footnote citing the Tennessee decision’s FCC Record number.²⁸

3. Applying the Continuous Requirement to an Applicant’s WAN is Inconsistent with the Goals of the Federal Universal Service Program

The District’s WAN was constructed between September 1998 and January 2002. No federal universal service funds were used to construct the WAN, or are used today to operate it.

The WAN has sufficient bandwidth - approximately 612 Mbps (OC-12) - to carry the District’s voice, data and video traffic. Were the District to lease comparable services from one or more service providers, its telecommunications services costs - and its funding request to the universal service fund - would be significantly higher than they are today.

For instance, prior to constructing its WAN, the District relied on approximately 1000 Centrex lines for voice connectivity. Today, as detailed above, the District obtains voice connectivity via just four ISDN PRI lines and approximately 90 Centrex lines.²⁹

²⁵ Tennessee decision at page 9, footnote 36; at page 13, footnote 56; and at page 14, footnote 58.

²⁶ Section 54.518 of the FCC’s rules states that if “states, schools, or libraries build or purchase a wide area network to provide telecommunications services, the cost of such wide area networks shall not be eligible for universal service discounts.”

²⁷ See www.sl.universalservice.org/reference/onpremp1.asp

²⁸ See www.sl.universalservice.org/reference/onpremp1.asp#footnote

²⁹ The District has 13 Centrex lines at the high school and 7 Centrex lines at each of its 11 elementary and middle schools.

Holding that an applicant, which constructs its own WAN, violates the Continuous requirement reduces applicants' incentive to explore solutions, which could have the net effect of reducing demand on the federal universal service fund. Conversely, holding that such WANs do not violate the Continuous requirement in no way renders their construction or operational costs eligible or otherwise undermines the force of section 54.518 of the FCC's rules.

7. Analysis of the Equipment Contained in the District's Funding Request

A. The Equipment Contained in the District's Request is not Part of its WAN

In considering whether the equipment at the schools in Tennessee constituted part of the WAN constructed by Tennessee, the FCC noted that it had to determine whether the relationship between the applicant and service provider "reaches essentially the same result as that which is prohibited by section 54.518 [of the FCC's rules]; namely whether...[the applicant] has in essence built or purchased a wide area network to provide telecommunications services."³⁰

In holding that the equipment at the schools was not part of the ineligible WAN, the FCC considered three factors: whether the applicant had an exclusive right to use the equipment, whether the applicant would ever own the equipment, and the size of the recurring and non-recurring charges billed to the applicant by the service provider.³¹

With regard to these three factors, the District's funding request is indistinguishable from Tennessee's. The District has no exclusive right to use the equipment, nor will it own the equipment at any point during or after the term of the contract with its service provider. A copy of the contract between the District and its service provider is attached as Appendix "A".³²

With regard to the size of the recurring and non-recurring charges, the District's contract complies with both of the rules established by the FCC.

Specifically, "initial capital costs" - defined on the SLD web site as "costs for equipment and its installation, but not reasonable costs for maintenance" - are less than "67% of total

³⁰ Tennessee's funding request covered several types of equipment. An unspecified number of routers - which the decision sometimes refers to as "router facilities" - were purchased by the service provider and "located on school premises" at "individual schools", Tennessee decision at page 9, footnote 36, and at page 14, footnote 58. In addition there were ten "large routers, one facing the Internet and the other facing the [service provider]/BellSouth Connectionless Data Service cloud, [with a]...firewall, caching server, mail server and...domain name service server" [between the routers] located at five schools which had been designated as "education hub sites". Tennessee decision at 13, footnote 56. The decision also mentions a third category of equipment - "caching servers" - but does not discuss their exact location or quantity. It seems likely that they are the same "caching servers" located at the five "education hub sites" discussed above. Tennessee decision at page 13, footnotes 56 and 57.

³¹ Tennessee decision at pages 18-19.

³² See paragraph 4 of the contract "Selection of Equipment" which states "[T]ennessee shall have no right, title or interest in or to the Equipment except the right to use [it] upon the terms and conditions herein contained. The Equipment shall remain the sole and exclusive personal property of the Lessor..."

charges (recurring plus non-recurring) [contained in the District's application for this] funding year."³³

In addition, initial capital costs are being billed to the District quarterly over the 42-month life of the contract, thereby complying with the rule requiring such costs to be billed over a period of at least 36 months if they are in excess of \$500,000.³⁴

Details regarding the costs associated with the District's funding request were attached to the District's FCC Form 471. However, in reviewing that data while preparing its appeal to the SLD, the District realized that it had made several errors in explaining which costs were associated with which school.³⁵ In addition, the District realized that, given the format of the data, it might not have been immediately clear to the SLD whether the District had complied with the initial capital cost rules discussed above. Consequently, in its appeal to the SLD, the District summarized each school's annual costs in the form of a one-page spreadsheet.³⁶ These summaries and the vendor price quotes on which they are based are also included in this appeal as Appendix "B".

B. The Equipment Contained in the District's Request is not Internal Connections

In finding that the equipment at the schools in Tennessee did not constitute Internal Connections, the FCC observed that, "as a practical matter...there are instances where it is difficult to draw a line between [priority 1 services] and internal connections because...service providers configure their networks and services differently."³⁷ In drawing this line, the FCC concluded that it had to bear in mind "the definition of internal connections, practical considerations, such as administrative ease and expediency in evaluating applications for discounts and how...priority rules with regard to eligible services may be affected."³⁸

The FCC concluded that it was "reasonable to establish a rebuttable presumption that, if a service includes facilities that are located on the school premises and are used to transport information, [those facilities] are internal connections."³⁹

In setting forth the criteria by which applicants could rebut that presumption, the FCC concluded that it is "reasonable to consider evidence of where the [priority 1] service begins and/or ends."⁴⁰

³³ See "Initial Capital Costs Cannot Exceed Certain Thresholds" at www.sl.universalservice.org/reference/OnPremP1.asp.

³⁴ See "Amortization of Capital Investment Costs" at www.sl.universalservice.org/reference/wan.asp.

³⁵ See footnotes 3, 4 and 5 of this document for details.

³⁶ These spreadsheets inadvertently included costs associated with T1 lines leased from another service provider. While this error did not have any impact on the analysis contained in the spreadsheets, it has been corrected in the attachments to this appeal.

³⁷ Tennessee decision at page 19.

³⁸ Tennessee decision at page 21.

³⁹ Tennessee decision at page 20. Section 54.506 of the FCC's rules states that "internal connections" are services, which are "necessary to transport information within one or more instructional buildings of a single school campus."

⁴⁰ Tennessee decision at page 20.

In considering the question of where priority 1 service “begins and/or ends”, the FCC noted that the equipment located at the schools covered by Tennessee’s funding request was the service provider’s “point of presence [and]...act[ed] as the point where the...service provider begins to provide...service.”⁴¹

The FCC did not define the term “point of presence”, but found it significant that the “schools’ internal networks...function without connection to the [service provider’s] hub site located on the schools’ premises...”⁴²

The FCC’s discussion of this point has since been codified in the “Local Data Network is Not Dependent Upon the Equipment” rule posted to the SLD web site. The web site states:

[i]f the on-premise Priority 1 components are removed, the local area data network must continue to function. On-premise components such as network hubs and network switches that are used to distribute data signals to multiple locations within a local area network would not meet this requirement, because if they were removed then the communication paths among the various network points would be broken. Notice that this condition applies to the local data network, and does not apply to an applicant’s telecommunications system that is limited to voice (or traditional fax) communication. Voice capability can be delivered to the applicant site through “plain old telephone service,” cellular, Centrex, key systems, and private branch exchange (PBX). Allowing shared infrastructure components for traditional voice services ensures a technologically neutral approach for the commercially available methods of providing these circuits.⁴³

Each school’s internal network complies with both the intent and the letter of this rule.

While voice and data traffic move over a single LAN within each school, each LAN is designed to ensure that should voice communications be compromised, data communications will proceed uninterrupted. Indeed, unlike in Tennessee, even if voice connectivity is disrupted, data connectivity both between classrooms, and between each school and external locations, will continue.

⁴¹ Tennessee decision at pages 20-21.

⁴² Tennessee decision at page 21. See also footnote 94 of the decision, citing Tennessee’s statement in an Ex Parte Letter to the FCC that “If (the connection between the school local area network and [the service provider’s] router) is unplugged, the (local area network) operates independently[;] there is no connection to the Internet via the [service provider], [but there is no] interruption in communications between and among classrooms.”).

⁴³ See “The Local Data Network is not dependent on the Equipment” at www.sl.universalservice.org/reference/OnPremP1.asp. This rule has since been modified to bar switches, which handle voice traffic – such as PBXs or the Cisco 3524s, utilized by the District. The version of the rule quoted above was in effect at the time the District filed its funding request.

Data and voice traffic on each school's LAN is separated via the use of Virtual LAN ("VLAN") software manufactured by Cisco. This software separates voice traffic from data traffic as effectively as if they were moving on two physically separate networks. As detailed in the discussion of numeric identifiers below, this separation ensures that should voice traffic be disrupted, data traffic will continue to move. It also ensures that should data traffic be disrupted, voice traffic will continue to move.

The FCC also found it significant that the equipment contained in Tennessee's funding request operated "solely for the purpose of providing [a priority 1 service; thereby]... provid[ing] some indication that the [equipment is] part of [that] service."⁴⁴

The VLAN software discussed above ensures that the equipment included in the District's funding request cannot be used for any purpose other than to provide the schools with voice connectivity to the PSTN as well as voice connectivity within and between schools via functionality such as four-digit dialing.

VLAN technology relies on numeric identifiers to identify and separate different types of traffic. Thus, the District's data traffic has been assigned identifiers in the 100-199 range, while all of its voice traffic has been assigned the identifier of 900.⁴⁵ Each piece of equipment that processes traffic on a LAN containing data and voice VLANs must have its ports programmed to recognize a single numeric identifier. Ports, which are not programmed to recognize a particular identifier, cannot be utilized to handle traffic associated with that identifier.

All of the ports on the equipment used to provide each school with voice connectivity have been programmed to recognize the 900 identifier associated with voice traffic. None of these ports have been programmed to recognize the identifiers in the 100-199 range associated with data traffic. Consequently, none of the equipment used to provide voice connectivity can be used to handle anything other than voice traffic.⁴⁶

Significantly, while moving voice and data traffic via a single LAN within each school allows the District to manage both types of traffic more efficiently, it does not allow the District to bypass the PSTN for its voice service. As noted above, each school obtains voice service via leased ISDN PRI and Centrex lines that connect them to the PSTN.

The FCC also noted other indicia that could be considered in determining whether an applicant had rebutted the presumption that equipment on its property constituted internal connections, "includ[ing]...but not limited to, ownership of the facility used to provide the service, any lease-purchase arrangements regarding such facility, exclusivity

⁴⁴ Tennessee decision at page 21.

⁴⁵ The specific identifier assigned to data traffic is driven by the site with which the traffic is associated.

⁴⁶ In addition, none of the equipment, which has been programmed to recognize identifiers associated with data traffic, can recognize the 900 identifier associated with voice traffic. The equipment that handles data traffic is not part of the District's funding request.

arrangements regarding such facility, [and] maintenance agreements regarding such facility....”⁴⁷

The equipment included in the District’s funding request provides each school with voice connectivity not data connectivity, but consistent with “Must Allow Sharing of Facilities” rule, the District has no contractual right to exclusive use of the equipment, or any other exclusivity agreement regarding the equipment.⁴⁸ The District’s contract is also consistent with the rule regarding maintenance published on the SLD web site.⁴⁹ The District’s service provider, not the District, provides maintenance on all of the equipment.⁵⁰

The rules associated with on premise priority one equipment also state that:

the components that make up the end-to-end service must be architecturally directly connected, and cannot have cabling, network hubs, or other components within this directly connected architecture, unless these other components are also a part of this end-to-end service and meet all requirements.⁵¹

As noted in the discussion of the VLAN software and its separation of each school’s voice and data traffic, none of the equipment acts as a network hub for data traffic, or provides any other type of functionality or support for that traffic.

Finally, none of the equipment at the schools is redundant. All of the equipment was selected per the competitive bid process mandated by the FCC and the procurement rules under which the District operates. In addition, the equipment was all reviewed and approved by the District’s Management Information Systems and Telecommunications project teams, and is “economically justifiable” and “cost effective”.⁵²

8. The Requested Equipment Supports ISDN PRI and Centrex Services, not the Fractional T1 and ISDN BRI Services Also Contained in the District’s Funding Request

As detailed above, the equipment detailed in the District’s funding request is used to deliver voice connectivity to each school via two digital transmission services: ISDN PRI

⁴⁷ Tennessee decision at page 21.

⁴⁸ See “Must Allow Sharing of Facilities” at www.sl.universalservice.org/reference/OnPremP1.asp. At the time the District filed its funding application, this rule applied to “data communications equipment”, but not to “an applicant’s telecommunications system that is limited to voice (or traditional fax) communication.”

⁴⁹ See “Maintenance is the Responsibility of the Service Provider at www.sl.universalservice.org/reference/OnPremP1.asp.

⁵⁰ See the last paragraph on page 1 of the contract, which states “Lessor hereby leases to Lessee...the Equipment described...herewith...(such Equipment together with all parts, replacements, repairs, additions and accessories...[shall be] hereinafter referred to as the Equipment)...”

⁵¹ See “Must be continuous” at www.sl.universalservice.org/reference/OnPremP1.asp.

⁵² See “Must be economically justifiable” at www.sl.universalservice.org/reference/OnPremP1.asp.

and Centrex. The equipment is not used to deliver the other digital transmission services - fractional T1 and ISDN BRI - that provide each school with data connectivity.⁵³

As detailed in Appendix "B" to this appeal, the District has provided extensive details regarding the cost of each digital transmission service used by each school and, in the case of the ISDN PRI and Centrex services, the costs associated with the equipment used to deliver those services.

While the District believes it has complied with all of the rules associated with on premise priority one equipment used to deliver voice connectivity, if the FCC finds that inclusion of the equipment costs in the District's funding request renders its ISDN PRI and Centrex costs Internal Connections costs, rather than Telecommunications Services costs, the District asks that this finding not be applied to the costs associated with each school's fractional T1 and ISDN BRI services. The fractional T1 and ISDN BRI services are used to provide each school with data connectivity. These services are not associated with the ISDN PRI or Centrex services, nor do they rely in any way upon the equipment used to deliver those services.

Thank you for your attention to this matter.

Sincerely,



David J. Boyer
Director of Business Services

Cc: Appendix A, SBC Contract
Appendix B, Vendor Price Quote
Appendix C, BEN Summary
Appendix D, Network Diagram

⁵³ Nor is the equipment used to deliver the T1 lines leased from AT&T that the schools use to access the Internet.